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**Beauty Ideals from Reality Television and Young Women's Tanning Behavior:  
An Internalization and Self-Objectification Perspective**

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## Abstract

The current cross-sectional study among 444 young [country deleted] women ( $M_{\text{age}} = 20.08$ ;  $SD = .91$ ) examined the influence of reality television exposure on tanning behavior, which is known to be a risk factor for the development of skin cancer among young women. In addition, it was explored whether the internalization of sun tan ideals from media content and self-objectification could explain this association. As such, this study introduced body image perspectives into media health research. A structural equation model revealed that watching reality television was related to the internalization of sun tan ideals and self-objectification. In turn, the internalization of sun tan ideals and self-objectification related to exposure to harmful UV radiation. This study therefore provides evidence for the explanatory value of both mechanisms in the relationship between reality television and UV exposure. Implications for skin cancer prevention campaigns are discussed.

*Keywords:* UV exposure, reality television, internalization, self-objectification

Beauty Ideals from Reality Television and Young Women's Tanning Behavior: An  
Internalization and Self-Objectification Perspective

According to the World Health Organization (2014), one in every three cancers diagnosed worldwide is a skin cancer; two to three million skin cancers are diagnosed globally each year. Most skin cancers are attributable to over-exposure to Ultraviolet (UV) radiation, which occurs through natural sunlight or indoor tanning beds (Gillen & Markey, 2012). Due to the increasing prevalence of UV exposure, especially among women (Coups, Manne, & Heckman, 2008), the current cross-sectional study focuses on explaining tanning behaviors among female college students. In addition, sunbed use has been shown to occur more frequently among whites than other racial groups (e.g., Fogel & Krausz, 2013; Guy, Tai, & Richardson, 2011; Neenan, Lee, & Lesesky, 2012). It follows that this particular health issue might primarily affect white women.

The decision of young white women to expose themselves excessively to UV radiation might be related to the way appearance and sexual attractiveness are valued in Western societies (Basch, Hillyer, Basch, & Neugut, 2012; Frisby, 2006). Popular mass media have been identified as the primary carriers of appearance-focused messages in which not only the importance of appearance is explained (e.g., for being romantically successful) but also what constitutes an ideal appearance (e.g., being thin and having a tanned skin tone) (Levine & Murnen, 2009). A recent television genre that has been criticized for emphasizing this view is reality television; two out of ten scenes in reality television portray women with unrealistic ideal appearances in scenes demonstrating their sexual success (Vandenbosch, Vervloessem, & Eggermont, 2013). Importantly, body image scholars have warned that exposure to these body ideals might socialize adolescents to adopt the (suntanned) media appearance ideal as part of their personal appearance standards to which they feel 'obliged' to comply with (Thompson & Stice, 2001; Tiggemann, 2005). Moreover, such media content may trigger

self-objectification (Aubrey, 2006a; Vandenberg & Eggermont, 2012), i.e. the tendency to observe oneself from an observer's perspective, focusing exclusively on one's appearance and disregarding one's personality (Noll & Fredrickson, 1998). Self-objectification is related to harmful consequences, such as eating disorders and depression (Moradi & Huang, 2008).

The primary aim of this cross-sectional study is to examine whether the internalization of tanned appearance ideals and self-objectification can explain how watching reality television relates to UV exposure. As such, the current study aims to improve scholarly knowledge in three ways. A first contribution refers to the incorporation of explanatory mechanisms underlying the relation between reality television and tanning behaviors. In particular, this study seeks to contribute to an emerging line of research that has introduced perspectives on the objectification of the body (i.e., self-objectification and internalization) into research on health problems (e.g., Tiggemann & Williams, 2012). Including explanatory mechanisms from body image research helps disentangle how media use may be related to young adults' involvement in problematic behavior (Ward, 2016).

Second, the study takes into account scholars' call to not only include self-objectification, but also the internalization of appearance ideals from media content and the relationships between these constructs (e.g., Moradi, 2010). So far, media research on the internalization of appearance ideals from media content focused on *general* beauty norms regarding body shape and appearance (e.g., Tiggemann, 2005) and showed the mediating role of this variable for explaining the relation between media use and self-objectification (Vandenberg & Eggermont, 2012). The current cross-sectional study explores whether internalization of *tanned* appearance ideals from media content may also explain (partly) how media content socializes young adult women to treat their bodies as objects (i.e., self-objectification).

Third, the study contributes to literature by focusing on the genre of reality television. Given its popularity among young audiences and its portrayal of "real people" in "real life

situations,” reality television might be particularly influential (Dallesasse & Kuck, 2013).

### **Reality TV and Sun Tan Ideals**

Through mass media, young adults are continuously exposed to sociocultural ideals of beauty (Levine & Harrison, 2004). Portrayals of white women that are considered sexually attractive in mass media most frequently emphasize beauty ideals, such as a perfectly tanned skin (Basch, Hillyer, Ethan, Berdnik, & Basch, 2014). Moreover, media messages regularly contain the premise that these ideals can be achieved if one follows the provided guidelines (Heinberg & Thompson, 1999). These messages support the belief that appearance is malleable and that women can and should strive towards an ideal appearance (Mazzeo, Trace, Mitchell, & Walker Gow, 2007).

One way to achieve this ideal is to obtain a tanned skin. Reality television shows portray the use of a sunbed as a successful strategy to become more attractive (Sherry & Martin, 2014). Research indicates that the most important motivating factor for using a tanning bed is in fact the desire to improve one’s appearance (Hillhouse, Turrisi, & Kastner, 2000). Having a tanned skin appears to be more desirable than to be pale in Western society (Frisby, 2006). Also, research shows that people believe they look thinner when they are tanned (O’Riordan et al., 2006), which might explain why a tanned appearance complies with the thin ideal in contemporary society. It follows that appearance motives are important predictors of tanning behaviors (Cafri, Thompson, & Jacobson, 2006). As mass media are important conveyors of these appearance ideals, research has examined the relation between media use and tanning behaviors. These studies indicate, for example, that exposure to tanned models in young women’s magazines is associated with an increased likelihood of endorsing pro-tan attitudes and beliefs (Dixon, Warne, Scully, Wakefield, & Dobbinson, 2011).

One media genre in particular, reality TV, might constitute a potent influence in the above explained relation between media use and tanning behavior, for two reasons. The first

reason relates to reality television as it claims to portray “real-life, unscripted situations” and to feature “real people” (Dallesasse & Kluck, 2013). This authenticity has implications for possible media effects as research shows that the more true or real cast members appear, the more audience members self-report that they learned something from the show (Hall, 2009). The second reason refers to prior findings suggesting that reality television is an especially important conveyor of beliefs about the importance and malleability of an idealized appearance (Egbert & Belcher, 2012), which may result in behavioral and mental health consequences (Markey & Markey, 2010).

Taken together, reality television is characterized by (a) cast members who are portrayed in “real life” situations, which might stimulate learning processes and heighten the relevance of their actions to the audience (Hall, 2009) and (b) a multitude of messages on appearance ideals. Therefore, examining the role of reality television in tanning behaviors may especially be warranted. Research linking reality TV and tanning is relatively sparse. Only recently, one study (Fogel & Krausz, 2013) found that watching reality TV was related to higher odds of using a sunbed or tanning excessively among young adult American women. The objective of this cross-sectional study is to replicate this finding among a sample of [country deleted] white women (i.e., college students) and explore whether objectification theory may offer an explanation for how reality television relates to UV exposure to darken the skin.

### **The Internalization of Tanned Appearance Ideals, Self-objectification, and Tanning**

This study builds on insights from objectification theory (Fredrickson & Roberts, 1997) and research reporting the prevalence of a tanned appearance ideal in popular media (e.g., Frisby, 2006) to explain how media use, through the internalization of sun tan ideals and self-objectification, might lead to UV exposure. First, we can assert from prior research that self-objectification might support UV exposure because the decision to expose oneself to UV results from a trade-off between the immediate interpersonal benefits from a tan – which are

most frequently related to appearance – and possible health risks, in which appearance reasons seem to prevail (Hillhouse et al., 2000). Following the tenets of objectification theory, this might be especially true for those who self-objectify, as they appear to be preoccupied with their physical appearance (Fredrickson & Roberts, 1997). In particular, self-objectifying individuals attach great importance to body attributes essential for an ideal appearance and thus value observable, appearance-based attributes higher than unobservable, competence-based attributes (Noll & Fredrickson, 1998). One prediction of objectification theory is that such body-focused, objectified perspective of the self can be triggered by media use (Aubrey, 2006a). For instance, it has been found that exposure to television content (Aubrey, 2006a) and magazines (Harper & Tiggemann, 2008) is directly related to self-objectification among young American adults.

Second, UV exposure might also be explained by the internalization of sun tan media ideals. Recently, scholars recommended to expand the internalization of appearance ideals beyond the thin ideal to other body parts, such as skin tone (Prieler & Choi, 2014) because a tanned appearance is part of the salient Western ideals (Frisby, 2006). Leaning on objectification theory, we can expect that when women internalize this media ideal, a tanned skin will become an important aspect of what they consider “attractive” and will be adopted as part of their own personal standards. In line with the literature on the internalization of thin body ideals from media content (e.g., Thompson & Stice, 2001), scholars have hypothesized that the internalization of sun tan ideals may be triggered by media exposure (Cafri et al., 2008). So far, one study among 156 undergraduate Australian women has demonstrated this prediction. Specifically, their measure on self-perceived influence of television was associated with the internalization of sun tan media ideals (Prichard, Kneebone, Hutchinson, & Wilson, 2014). Moreover, studies linking the internalization of sun tan media ideals to UV exposure are lacking. However, just like the internalization of the thin body ideal has been related to

appearance-modification behaviors to obtain the internalized norm of the thin body (e.g., dieting; Thompson & Stice, 2001), we can expect the internalization of sun tan ideals may be related to women's UV exposure.

Third, a recent review of objectification theory research (Moradi, 2010) and empirical research following this review (e.g., Vandenberg & Eggermont, 2012) suggested that self-objectification and the internalization of cultural standards of attractiveness are highly related and should both be included in media studies on objectification theory. More specifically, scholars have predominantly related both constructs by describing internalization as a process preceding self-objectification; Scholars have argued that exposure to idealized feminine body images (e.g., thin, sexy, tanned) may socialize women to internalize appearance ideals as personal standards and, subsequently, develop an objectified view of themselves. In particular, women who internalize appearance ideals, such as the tan ideal, accept the idea that women should epitomize an ideal look and thus highly value their appearance. In line with this study's focus on tanned ideals, we would argue that women who internalize tanned ideals aspire a tanned look. Such aspirations may lead them to evaluate their own skin, and ultimately their overall appearance, from an observer's perspective (i.e., self-objectification). Indeed, objectification theory argues that when a woman learns that she is valued only for her overall body and/or *separate body parts* (as is the case with evaluating one's tanned skin), she is likely to self-objectify (Bartky, 1990; Fredrickson & Roberts, 1998). Prior research has followed this reasoning. Stapleton et al. (2016) showed that the internalization of sun tan ideals was related to increased tan surveillance or the regular evaluation of one's own (tanned) skin. Women who internalize sun tan ideals and monitor their tanned skinned can be argued to value this particular body part (i.e., their tanned skin) over their personality or health and can as such be expected to self-objectify. However, no study has yet explored whether the internalization of sun tan ideals relates to self-objectification.



If we combine literature on tanning as a behavior that is mostly driven by appearance-based motivations (e.g., Cafri et al., 2008) with literature on media use affecting the internalization of beauty standards from media content and self-objectification (e.g., Knauss, Paxton, & Alsaker, 2008), then it seems warranted to examine the role of reality television on tanning behaviors, through the internalization of sun tan media ideals and self-objectification.

### **The Current Study**

The current cross-sectional study tests an integrated model that aims to explain the relation between watching reality television and UV exposure to darken the skin among young (i.e., 18- to 22-year-old) white women. Figure 1 illustrates our hypotheses.

[FIGURE 1 about here].

This study focuses on emerging adult women as rates of UV exposure are the highest at this age (Coups et al., 2008). Moreover, this age group is the most at risk for skin cancer ([country deleted] Cancer Registry, 2012). From a developmental perspective, this finding may not be that surprising. Emerging adulthood (a developmental period from late teens through the twenties) is characterized as a time of extensive identity exploration, increased autonomy, and decreased parental socialization and control (Arnett, 2000). This age period is also marked as a time of heightened susceptibility to various risk behaviors, including tanning behaviors. In addition, only young women (aged 18 to 22) were sampled as various tanning behaviors are most prevalent among girls and young women (Brooks et al., 2006).

The study will control for BMI, age, and country of origin, as research suggests that these factors may affect the hypothesized process (Fredrickson & Roberts, 1997; Moradi & Huang, 2008). Also, this study will take into account whether respondents know someone with skin cancer as research indicates that those who know/knew someone with skin cancer are more likely to have a greater perception of their own risks and the potential negative consequences of UV exposure (Jones, Harris, & Chrispin, 2010).

## Method

### Sample and Participation Selection

In the fall of 2013, an online survey on “The everyday life of female college students” was posted on several student fora and social networking sites in [country deleted]<sup>1</sup>. To enhance response, incentives were offered. Several reward cards were distributed by a lottery to participants (€25). To ensure the representativeness of the sample, the survey was also disseminated through the electronic network of high schools that offer one extra specialization year (as such, students over 18 years could be approached). For this, approval was obtained from the school head. Ethical approval for this research was received in accordance with customary guidelines in [country deleted]. A total of 495 female 18- to 26-year-olds participated in the study. We only included young students enrolled in higher education or at the host university in our analytical sample because we aimed for homogeneity in the characteristics of our sample. In addition, only young women (aged 18 to 22) were sampled as various tanning behaviors are most prevalent among girls and young women (Brooks et al., 2006). This limited the age range to 18 and 22 years. Furthermore, the analyses were conducted by using only data from white respondents ( $N = 444$ ,  $M_{age} = 20.08$  years,  $SD = .91$ ), as the variables of interest in this study may be less relevant for respondents with darker skin. In addition, European individuals have reported higher rates of tanning behavior (Coups, Manne & Heckman, 2012) and endorse more positive attitudes toward a tanned appearance (Frisby, 2006) than individuals of other racial backgrounds.

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<sup>1</sup>Data of this study were also used in another published paper of two co-authors of the current study (identifying data deleted). This paper focused on a broader sample (age range 18-26 years), while the current study limits its focus on 18-to 22-year-old women. This paper can be acquired by sending an email to the corresponding author.

## Measures

**Watching reality television.** Using a 6-point scale, ranging from “(almost) never” (= 1) to “(almost) always” (= 6), respondents indicated how often they had watched each of 30 television programs that were rated most popular in 2013. This list was obtained from CIM (Centre for Information on Media, [country deleted]) and was based on viewing ratings. Ten of these programs were popular reality television programs, which were the focus of this study. Specifically, *Geordie Shore*, *The Valleys*, and *Snooki & jWoww* are popular MTV reality shows that revolve around (a group of) young adults and follow them in their everyday lives. Five programs that are aired on two [country deleted] channels that specifically target women were included as well (*Hotter Than My Daughter*, *Singl3s*, [identifying data deleted], [identifying data deleted], and *Project Runway*). Lastly, respondents also indicated how often they watched two television shows in which well-known [country deleted] participated in a competition, [identifying data deleted] and [identifying data deleted]. Afterwards, three trained research experts judged that all these programs were characterized by a narrow emphasis on outward appearance for being sexually attractive. Prior research already indicated that MTV reality shows feature heavily tanned cast members who highly value appearance (Flynn, Park, Morin, & Stana, 2015; Sherry & Martin, 2014). Vandenbosch et al. (2013) further showed that sexualized appearance ideals occur in one out of four scenes in music entertainment television which frequently broadcasts reality television shows. Additionally, programs such as *Hotter Than My Daughter* and [identifying data deleted] feature a make-over of the main character(s) in a particular episode, thereby placing emphasis on outward appearance (e.g., Gallagher & Pecot-Hébert, 2007). The two competition-based reality television shows included in our measure can also be characterized as appearance-focused as both programs focus on the body (the competition centers around dancing and diving). Together, the ten programs showed sufficient internal consistency ( $\alpha = .72$ ). An

estimate of watching reality television was created by calculating a mean score of the 10 programs.

**Self-objectification.** Self-objectification was measured with an adapted version of Noll and Fredrickson's original Self-Objectification Questionnaire (1998) (Vandenbosch & Eggermont, 2012). Participants rated the importance of 12 body attributes on a 10-point scale ranging from "*not at all important*" (=1) to "*very important*" (=10) (for more information on the advantages of the adapted version of the Noll and Fredrickson questionnaire see Vandenbosch & Eggermont, 2012). A principal components analysis extracted two factors: one competence-based factor (*eigenvalue* = 4.15; *explained variance* = 34.54%,  $\alpha$  = .80) and one appearance-based factor (*eigenvalue* = 2.03; *explained variance* = 16.88%,  $\alpha$  = .73). In line with the study of Vandenbosch and Eggermont (2012), physical attractiveness, coloring, weight, sex appeal, and measurements loaded on the appearance factor, while muscle tone, muscular strength, physical coordination, stamina, health, physical fitness, and physical energy were competence-based attributes. Following Vandenbosch and Eggermont (2012), the difference between the mean scores of the appearance- and competence-based factors addressed the extent to which respondents valued appearance over competence (i.e., self-objectify) (ranging from -9 to 9). Higher scores indicated increased self-objectification.

**The internalization of tanned media appearance ideals.** The Physical Appearance Reasons for Tanning Scale (PARTS) (Cafri et al., 2006) was designed to measure sociocultural influences on tanning behaviors and consists of six lower-order factors (i.e. peers/family, acne, skin aging, physical fitness, general attractiveness, and media). This study focused on the internalization of tanned ideals in the media, which has demonstrated validity and test-retest reliability in prior research among female college students (Cafri et al., 2006). Moreover, this subscale originally contained six items comprising sun tan ideals in magazines and television. As the current study examines the influence of (reality) television, only items

concerning the influence of television were used. Respondents used a 5-point scale, ranging from *I totally disagree* (= 1) to *I totally agree* (= 5), to evaluate four items, such as “I wish I had a tan like the people on TV” and “I want to be as tan as TV stars.” The scale had good reliability ( $\alpha = .87$ ); an estimate of the internalization of tanned appearance ideals was created by calculating a mean score of the four items. A higher score on this measure represents more internalization of tanned appearance ideals as a personal standard.

**Tanning behaviors.** In line with de Vries, Mesters, van’t Riet, Willems, and Reubsaet (2006), sun exposure was measured by asking respondents to indicate how long they were outside in the sun on sunny days during the last year on a 5-point scale with *never* (= 1), *less than one hour* (= 2), *at least one hour, but less than 3 hours* (= 3), *at least 3 hours, but less than 6 hours* (= 4) and *as long as possible* (= 5).

In addition, de Vries et al. (2006) measured sunbed use by asking respondents about the average frequency of sunbed use per year with *never* (= 1), *less than 5 times per year* (= 2), *between 6 and 15 per year* (= 3), *between 16 and 25 times per year* (= 4), and *more than 25 times per year* (= 5). To verify the accuracy, a group of experts on malignant melanoma examined both measures (de Vries et al., 2006).

**Control variables.** Respondents indicated their country of origin (1 = [country deleted]; 2 = *other country*) and age. To calculate their BMI, respondents were asked to rate their height and weight. Respondents further indicated if they had known/know someone with skin cancer (1 = *no*, 2 = *yes*).

## Results

### Descriptive Statistics and Preliminary Analyses

Descriptive statistics for self-objectification, internalization, tanning behaviors, and watching reality television are presented in Table 1. Sun exposure had a mean level of 3.82 ( $SD = 0.91$ ), indicating that respondents stayed for almost three hours in the sun on sunny

days during the past summer. Only two respondents indicated that they spent no time in the sun on sunny days during the last year. Five percent indicated to stay less than one hour in the sun, while 28% indicated that they stayed as long as possible in the sun. The remaining respondents indicated to stay at least one hour, but less than three hours (33%) and at least three hours, but less than six hours (33%) in the sun.

The majority of the women in our sample indicated to never use a sunbed (78%). The remaining 22% however indicated to have used a sunbed in the previous year, and did so with varying frequencies; 14% used it less than five times per year, while only 0.5% or 2 respondents indicated to use it more than 25 times per year. Another 7% of those indicating to have used a sunbed, reported to use it 16 to 25 times per year. Overall, the findings on sunbed use are comparable to reports in other studies (e.g., O’Riordan, et al., 2006).

With regard to control variables, 14% of the women in our sample indicated to know someone with skin cancer. The majority (96.8%) was born in [country deleted]. Women in our sample had a mean BMI of 21.55 ( $SD = 2.54$ ).

Zero-order correlations were calculated and showed significant relationships between watching reality television, the internalization of sun tan media ideals, self-objectification, and UV exposure (see Table 1).

[TABLE 1 about here]

### **Testing the Hypothesized Model**

The hypothesized explanatory model (see Figure 1) was tested with structural equation modeling (AMOS) using the maximum likelihood method<sup>2</sup>. The chi-square-to-degrees-of-

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<sup>2</sup>The analytical sample of the model that is reported in the manuscript consisted of 444 female students between 18 and 22 years old. There were no significant age differences (18-to 20-

freedom ratio ( $\chi^2/df$ ), the root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the adjusted goodness-of-fit index (AGFI) were used to address the fit of the model (Byrne, 2010). The model controlled for the baseline values of the country of origin, age, BMI, and knowing someone with skin cancer by employing these variables as predictor variables for all of the dependent variables (i.e., internalization, self-objectification, and tanning behaviors), and by letting them covary with the media variable and each other.

[FIGURE 2 about here]

The results are summarized in Figure 2. For clarity, the measurement details and control variables are not given. We first calculated Skewness and Kurtosis values to screen our data for normality. It is assumed that an absolute Skewness value greater than 3 and an absolute Kurtosis value greater than 10 may indicate a deviation from normality (Kline, 2011). Based on these calculations (Skewness and Kurtosis, respectively), reality television viewing (6.49;0.827) and sunbed use (21.34;27.34) were considered to exceed the expected range. To resolve this issue, we decided to perform bootstrapping in AMOS, which has proven to be an adequate way to deal with non-normal data in structural equation modeling (Hancock & Mueller, 2006).

The model showed an adequate fit of the data and yielded a chi-square value of 39.75 with 26 degrees of freedom,  $p < .05$ , CFI = .99, RMSEA = .03, AGFI = .95,  $\chi^2/df = 1.53$ . Watching reality television was related to the internalization of sun tan media ideals,  $\beta = .15$ ,  $SE = 0.07$ , 95%CI = [.06, .26],  $p < .01$ , and self-objectification,  $\beta = .15$ ,  $SE = 0.09$ , 95%CI = [.08, .25],  $p < .01$ . Self-objectification was, in turn, positively related to sunbed use ( $\beta = .11$ ,  $SE = 0.02$ , 95%CI = [.01, .19],  $p < .05$ ) and negatively related to sun exposure ( $\beta = -.10$ ,  $SE =$

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year-olds versus 21- to 22-year-olds). The results of this moderation analysis can be obtained upon request to the corresponding author.

0.03, 95%CI = [-.19, .01],  $p = .05$ ). The internalization of sun tan media ideals was related to sunbed use ( $\beta = .24$ ,  $SE = 0.04$ , 95%CI = [.14, .34],  $p < .01$ ) and sun exposure ( $\beta = .26$ ,  $SE = 0.05$ , 95%CI = [.15, .35],  $p < .05$ ). Also, internalization of sun tan media ideals significantly was related to self-objectification ( $\beta = .27$ ,  $SE = 0.07$ , 95%CI = [.17, .35],  $p < .001$ ).

Results further confirmed that there was a significant mediation effect in the tested model. In particular, self-objectification mediated the relationship between internalization and sunbed use (Indirect effect = .03, 95% CI [.006, .06],  $p = .04$ ) and sun exposure (Indirect effect = -.03, 95% CI [-.06, -.001],  $p = .01$ ) and the internalization of sun tan ideals mediated the relation between watching reality television and self-objectification (indirect effect = .04, 95% CI [.01, .08],  $p = .01$ ).

However, if there are multiple mediators, AMOS does not compute indirect effects for each mediator. To decompose the total indirect effect into the separate effects for the internalization of sun tan ideals and self-objectification, user-defined estimands were created. These tests revealed that watching reality television was associated with increased levels of the internalization of sun tan ideals, which was, in turn, related to higher levels of sunbed use ( $\beta = .04$ ,  $SE = 0.02$ ,  $p < .01$ , 95% CI [.012, .085]). Next, we tested whether self-objectification mediated the relation between watching reality television and sunbed use. Results showed that this indirect relation was significant ( $\beta = .02$ ,  $SE = 0.01$ ,  $p < .01$ , 95% CI [.004, .041]). With respect of sun exposure, the results revealed that the internalization of sun tan ideals mediated the relationship between watching reality television and sun exposure ( $\beta = .05$ ,  $SE = 0.02$ ,  $p < .01$ , 95% CI [.015, .099]). Again, the relation between reality television viewing and levels of sun exposure was significantly mediated by self-objectification ( $\beta = -.02$ ,  $SE = 0.01$ ,  $p < .05$ , 95% CI [-.056, -.001]).

In sum, the findings lend partial support to the theoretical model in which reality television related to more sun exposure and sunbed use through the internalization of sun tan



ideals and self-objectification.

### **Discussion**

Prior research together with health campaigns have warned for the adverse health effects of UV exposure to tan one's skin (e.g., Rass & Reichrath, 2008). Nonetheless, research (including the current study) has demonstrated that young white women continue to engage in tanning behaviors, thereby willingly running a higher risk of developing skin cancer (Gillen & Markey, 2012). Research has suggested that one of the causes of such UV exposure may be the viewing of reality television as it promotes a tanned appearance as attractive (Fogel & Krausz, 2013). This study supports this reasoning and found a relation between watching reality television and UV exposure among 18-to 22-year-old white women. Moreover, we aimed to explain this association by applying the framework of objectification theory. A structural equation model showed that watching reality television was positively related to the internalization of sun tan ideals and self-objectification. Both the internalization of sun tan ideals and self-objectification were, in turn, related to unhealthy UV exposure. The internalization of sun tan ideals also positively related to self-objectification.

#### **The Explanatory Value of the Internalization of Sun Tan Ideals and Self-Objectification**

Cafri et al. (2008) introduced the concept of the internalization of mediated sun tan ideals to research on women's decision to UV expose. Although the influence of popular mass media on the internalization of appearance media ideals has been given much scholarly attention (Grabe, Ward, & Hyde, 2008), our study was among the first to demonstrate that a popular television genre may trigger such internalization of sun tan ideals in white college students. Our findings suggest that the high prevalence of tanned models in popular television shows, such as reality television programs, affects the standards of attractiveness that young women impose on themselves (Fogel & Krausz, 2013).

Moreover, this study supports Cafri et al.'s (2008) prediction on the value of taking into account the internalization of sun tan ideals when studying UV exposure. Earlier studies indicated that the internalization of appearance ideals plays an important role in the development of various health risks (Moradi & Huang, 2008). Our study shows that the internalization of media ideals that are specifically related to a tanned appearance relate to risky tanning behaviors among college students. Women in our study were more inclined to sunbathe excessively or use a sunbed when they had internalized the standard that a tanned woman is considered attractive.

Regarding the explanatory mechanism of self-objectification, this study showed, first, that watching reality television was positively related to self-objectification, which is in line with previous research (Aubrey, 2006a; Harper & Tiggemann, 2008). In turn, self-objectification positively related to sunbed use. This finding is in keeping with objectification findings that show that women who self-objectify are more preoccupied with their looks, which seems to add to their willingness to improve how attractive they appear to others (Calogero, Pina, Park, & Rahemtulla, 2010).

However, our results unexpectedly showed that self-objectification was negatively related to sun exposure. The current study is the first to reveal this surprising relationship. A feasible explanation might be the intervening role of body shame, i.e., the negative emotion originating from perceiving a discrepancy between the actual body and the internalized ideal body (Noll & Fredrickson, 1998). As body shame has been theorized to be a psychological consequence of self-objectification and feelings of shame trigger the desire to hide or escape the gaze of others (Fredrickson & Roberts, 1997), this might explain why those scoring high on self-objectification are less, instead of more, inclined to sunbathe. Another explanation refers to a potential side effect of sun exposure on appearance. While a tanned skin is part of the salient cultural ideal, laying in the sun for hours (without any form of protection) may lead

to sunburns (Melia & Bulman, 1995). Such sunburns are considered rather unattractive and may play a role in the decreased excessive tanning behavior among self-objectifying women. In line with this reasoning, it can further be argued that women who self-objectify might be more inclined to use bronzers or spray-on tans to obtain a tanned skin, rather than expose themselves to UV. More research is necessary to test these speculative argumentations.

Furthermore, our findings point at the theoretical intertwining of the internalization of media ideals and self-objectification, and extended it to sociocultural ideals that are specifically related to a tanned skin. In particular, white college students who had internalized the ideal of a tanned appearance, were more likely to self-objectify. The study thus warns future objectification and body image scholars to have attention for other appearance standards apart from body shape ideals. Prior research has equated the internalization of appearance ideals to the internalization of the thin ideal and has argued that self-objectification is primarily derived from society's focus on body size and shape (Aubrey, 2006b; Fredrickson & Roberts, 1997). However, results from this study suggest that this line of research might benefit from taking into account other aspects of appearance ideals, such as skin tone. Our findings are further in line with scholars' assumption that internalization may precede self-objectification. However, we should be careful in interpreting this finding because the cross-sectional design of the current study precludes us from eliminating the possibility that both constructs may also be reversely related.

Based on our findings, we urge future research focusing on tanning behaviors to take into account the interplay between reality television use, self-objectification, internalization, and tanning behavior. Reality television was not only directly related to self-objectification, but also through the process of internalization. Self-objectification, in turn, related to tanning behavior. So to fully understand body image, tanning behavior and media ideals, our study suggests to consider all the pathways between media variables, internalization, self-

objectification, and tanning behaviors.

In sum, the current study adds to prior research on reality television as a source teaching young women about the prevailing appearance ideals. Specifically, the current findings suggest that reality television can make women aware about more subtle appearance features, such as a tanned skin. In fact, reality television exposure was, in our study, indirectly related to harmful UV radiation through a psychological process in which women first accept the existence and importance of appearance standards for their skin tone and subsequently view themselves in terms of their looks rather than personality. More specifically, we followed earlier objectification research by assuming that the extent to which women internalized appearance ideals, or more specifically sun tan ideals, would precede self-objectification. In line with these earlier studies (e.g., Vandebosch & Eggermont, 2012), we found a significant positive association between the internalization of sun tan ideals and self-objectification. Although prior studies have all modelled and theorized internalization as a predictor of self-objectification (e.g., Moradi & Huang, 2008; Vandebosch & Eggermont, 2012), there are reasons to assume that a reverse relation could also occur; Women who self-objectify and thus consider their appearance to be more important than health or personality may also be more inclined to accept appearance ideals, encountered through reality television, as personal standards. As far as we know, no study has yet looked at this reverse relationship. As such, an interesting and relevant future line of research is to use longitudinal designs in order to test and compare the association in both directions. Another important finding of our study relates to self-objectification as a factor that may contribute to women's engagement in harmful appearance behaviors. Prior studies have reported on positive associations between self-objectification and excessive dieting (Noll & Fredrickson, 1988) and cosmetic surgery (e.g., Calogero et al., 2010). Our study adds that women who self-objectify are more likely to use a sunbed or spend excessive amounts of time in the sun.

## Limitations

The findings of this study are limited due to its cross-sectional design. The proposed relations should be subject to future experiments or longitudinal research to examine the causal and temporal order. Although the effect sizes reported in this study are small, they are comparable to other media effect studies (e.g., Cafri, Yamamiya, Brannic, & Thompson, 2005; Ferguson & Kilburn, 2009). According to Valkenburg and Peter (2013), the same (small to moderate) effect sizes are found in other disciplines as well. Moreover, reporting media effects, albeit small, remains relevant to both scientific literature and health professionals. Given the popularity of reality television (Dallesasse & Kuck, 2013), small effects become considerable when they occur in a large group and are therefore worthy of future scholarly attention. Another limitation of the current study is that it only surveyed 18- to 22-year-old women. Research indicates that men are also frequently portrayed with a sun tanned appearance (Basch et al., 2014). This might be an interesting avenue for future research. This study was also limited by its assessment of sun exposure. In particular, respondents were asked to indicate how long they stayed in the sun on sunny days. This implied that girls who, for instance, do outdoor recreational activities might have indicated the hours they spend in the sun during these activities as well. Therefore, we could not be sure that respondents engaged in outdoor sunning to acquire a tan. Nevertheless, considering our sample consists of students, sun exposure due to job activities seems less likely. As such, we believe it is plausible that the students in our sample who were long in the sun, do this by choice. The findings may further be limited by the study's position within the [country deleted] context. For instance, we cannot preclude this specific context from influencing our findings as a result of a different weather conditions. The survey was conducted in the fall of 2013 and respondents filled out questions about their tanning behaviors in the preceding summer. Additionally, in [country deleted] the summer of 2013 was marked as an

exceptionally wet summer (KMI, 2014), which might cause respondents to have difficulty remembering their outdoor tanning behaviors as there were few opportunities to sunbathe outdoors. Finally, it should be noted that several factors may play a role in women's decision to sunbathe or use a sunbed to obtain an idealized look. In addition to media, peer influence (e.g., Banerjee, Greene, Bagdasarov, & Campo, 2009) and skin type (Bränström, Ullén, & Brandberg, 2004) may also be relevant factors. Studies incorporating such factors as well would further increase our understanding of the role of media exposure in women's UV exposure.

### **Implications for Prevention**

The findings of this study could be important for the development of skin cancer prevention campaigns. Based on prior literature, it can be inferred that prevention campaigns will remain ineffective without a full understanding of all determinants of (health) behavior (Glanz & Bishop, 2010). Therefore, it might be insufficient to only emphasize the risks associated with UV exposure. An important contribution of the current study is that it suggests that skin cancer prevention campaigns improve by taking into account the importance of sun tan ideals in contemporary society. In particular, the belief that a sun tan is considered attractive constitutes an important barrier for young women to engage in protective behavior and/or to stop exposing themselves to harmful UV radiation. On the basis of our results, we propose two strategies that could be implemented by prevention programs. First, such initiatives might benefit from toning down the ideal of a tanned skin that is promoted in reality television by, for instance, emphasizing the beauty of a natural (healthy) pale skin. Additionally, mass media (and in particular reality television) often highlight the benefits of complying with appearance ideals, including having a tanned skin (e.g., Cho, Hall, Kosmoki, Fox, & Mastin, 2010). In line with previous research (Dixon et al., 2011), our study found that exposure to such media portrayals related to young women's motivations to work

towards obtaining the sun tanned ideal and actual efforts to obtain a tanned skin (e.g., UV exposure and tan bed use). Such relations between reality TV and tanning outcomes may potentially be countervailed by emphasizing the benefits of a natural skin color for their health, but also their long-term appearance (e.g., no photo-aging (less wrinkling) of the skin when getting older; e.g., Šitum et al., 2010). A recent study supports this reasoning and showed that interventions that focus attention on negative appearance outcomes of UV exposure were more effective in increasing men's sun protection behaviors in the long term (i.e., 6 months) as opposed to interventions focusing solely on health outcomes (Owen, Grogan, Clark-Carter, Buckley, 2016). Such campaigns could, therefore, be more adequate at changing tan-related behaviors and, as such, at reducing skin cancer rates.

However, to effectively alter the ideals of attractiveness, a collaboration of multiple actors (i.a. media) is necessary. Therefore, we propose a second strategy, which can be targeted at an individual level. Health communications could improve by responding to internalization and self-objectification as cognitive antecedents of sun tan behavior.

## **Conclusion**

Together, our results indicate that self-objectification and the internalization of appearance ideals are not only related to body-modification behaviors, but also to health-related behaviors, such as tanning. Our study was among the first to indicate the relevance of body image theory to explain the relationship between reality television and tanning behaviors among white college students and warrants attention for the prevalence of sun tan ideals in popular reality television given its relationship with UV exposure.

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## head: REALITY TELEVISION AND TANNING BEHAVIOR

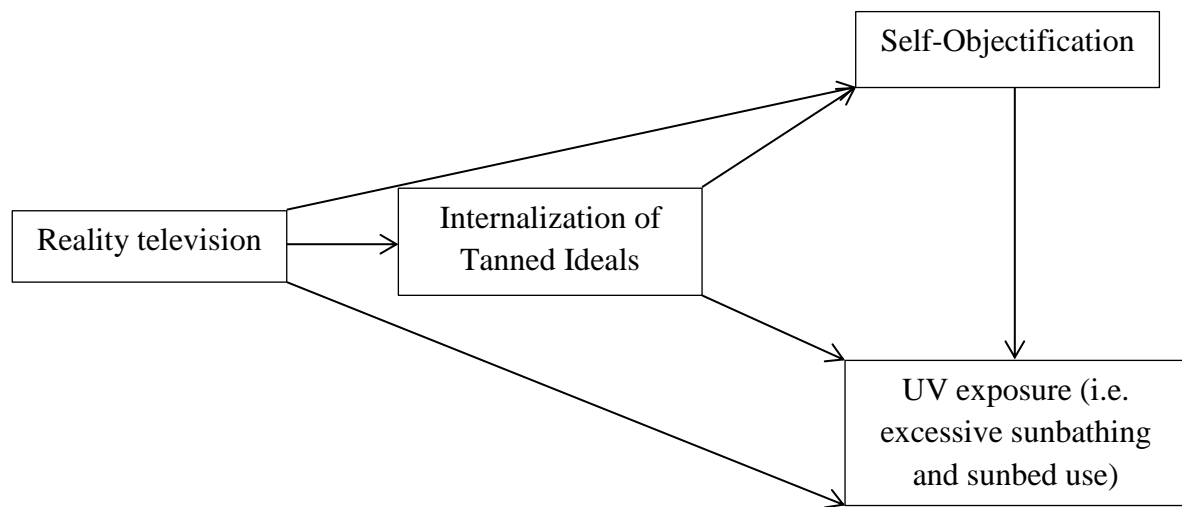
Table 1

*Means, Standard deviations, and Zero-order correlations.*

	1	2	3	4	5
1. Reality television	1	.14***	.19***	.12**	-.04
2. Internalization of sun tan ideals		1	.29***	.27***	.22***
3. Self-objectification			1	.20***	-.03
4. Sunbed use				1	.11**
5. Sun exposure					1
Range	1-5	1-5	-4.94 – 4.14	1-5	1-5
<i>M (SD)</i>	2.04(0.71)	2.47(0.88)	.30(1.42)	1.33(0.71)	3.82(0.91)

*Note.* \*  $p < .05$ , \*\*  $p < .01$ ; \*\*\*  $p < .001$





*Figure 1:* The hypothesized model

## head: REALITY TELEVISION AND TANNING BEHAVIOR

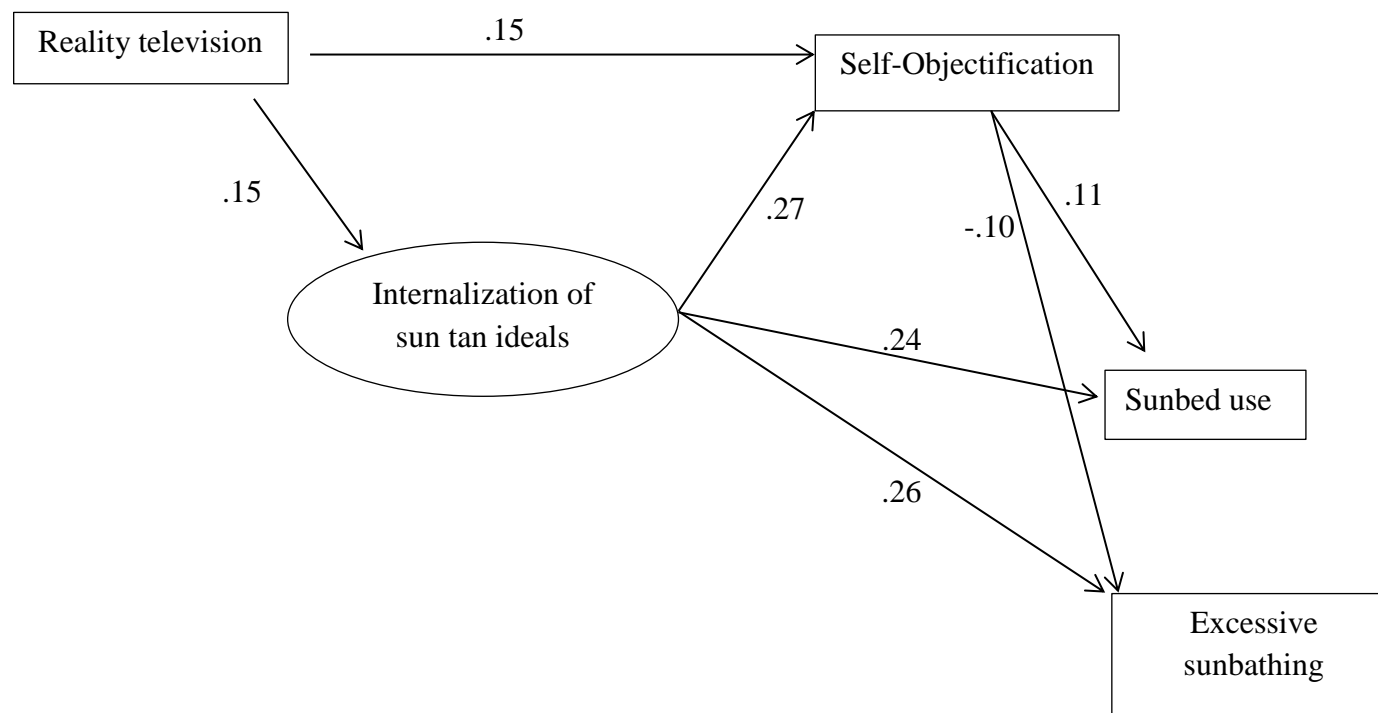


Figure 2: Structural equation model for the relationships between watching reality television, internalization, self-objectification and unhealthy sun behavior. *Note.* Only significant paths (at  $p < .05$ ) are shown. For clarity, error terms, covariance and measurements are not shown.